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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,762	12/02/2003	Shingo Nozawa	03500.017770.	1801

5514 7590 07/17/2007

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EXAMINER	
DANG, HUNG Q	

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
07/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/724,762	NOZAWA, SHINGO	
	Examiner	Art Unit	
	Hung Q. Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/05/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 2-5, 10, and 12 are objected to because of the following informalities: Claims 2-4 recite "**interframe-encoded** frames," which appears to be "**intraframe-encoded** frames". Claim 5 depends on claim 4, thus, being objected for that reason. Claims 10 and 12 recite "a rate of the **intraframe-encoded** frames after the issue of the instruction to start the recording operation lower than that of the **interframe-encoded** frames in and before the issue of the instruction to start the recording operation". Similarly, the "**interframe-encoded** frames" appears to be "intraframe-encoded frames". Appropriate correction is required.

To expedite the process, in these places, "interframe" will be interpreted "intraframe".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Enari (US Patent 5,774,624).

Regarding claim 1, Enari discloses an image pickup apparatus (Fig. 2) comprising: image pickup means ("terminal 40" in Fig. 2); encoding means for encoding a moving picture signal output from the image pickup means ("Variable-Length Coding

Circuit 44" in Fig. 2) using an intra-frame encoding method and an inter-frame encoding method to generate an encoded image signal (column 3, lines 50-54) including therein a plurality of picture groups constituted by an image signal of n frames (n: an integer equal to or larger than two) including intra-frame encoded frames obtained through the intra-frame encoding processing and inter-frame encoded frames obtained through the inter-frame encoding process (Fig. 5; Fig. 7; Fig. 8; the "picture group" can be chosen as follows: group of pictures 7-11 as a group , pictures 12-22 as another group and etc.); recording means for recording the encoded image signal generated by the encoding means on a recording medium (column 3, lines 50-67; Fig. 2); and control means for, in accordance with an instruction to start recording of the moving picture signal, controlling the recording means so as to start a recording operation from the image signal of a frame corresponding to the instruction to start the recording operation, and for controlling the encoding means so as to change a structure of the picture groups generated after issue of the instruction to start the recording operation from a structure of the picture groups generated in and before the issue of the instruction to start the recording operation (in Fig. 5, at least the order of the picture is changed, thus the structure is changed).

Regarding claim 2, Enari also discloses the control means controls the encoding means so as to make the number of intra-frame encoded frames within each of the picture groups generated after the issue of the instruction to start the recording operation smaller than that of intra-frame encoded frames within each of the picture groups generated in and before the issue of the instruction to start the recording

operation (In Fig. 5, the number of intra-frame encoded frames within each of the picture groups after the issue of the instruction to start recording is one in picture group of 9 frames while, in column 3, lines 45-50, the number of intra-frame encoded frames within each picture group generated in and before the issue of the instruction to start the recording is 9 in picture groups of 9 frames).

Regarding claim 3, Enari also discloses the control means controls the encoding means so as to make the rate of intra-frame encoded frames within each of the picture groups generated after the issue of the instruction to start the recording operation lower than that of intra-frame encoded frames within each of the picture groups generated in and before the issue of the instruction to start the recording operation (In Fig. 5, the rate of intra-frame encoded frames within each of the picture groups after the issue of the instruction to start recording is one in every 9 frames while, in column 3, lines 45-50, the rate of intra-frame encoded frames within each picture group generated in and before the issue of the instruction to start the recording is 9 in every 9 frames).

Regarding claim 4, Enari also discloses the control means further controls the encoding means so as to insert one frame of the intra-frame encoded frames into one picture group after the issue of the instruction to start the recording operation, and so as to insert a plurality of frames of the inter-frame encoded frames into one picture group in and before the issue of the instruction to start the reading operation (In Fig. 5, the number of intra-frame encoded frames within each of the picture groups after the issue of the instruction to start recording to be inserted is one in picture group of 9 frames while, in column 3, lines 45-50, the number of intra-frame encoded frames within each

picture group generated in and before the issue of the instruction to start the recording to be inserted is 9 in picture groups of 9 frames).

Regarding claim 5, Enari also discloses the control means controls the encoding means so as to insert one frame of the intra-frame encoded frames every n frames (n: an integer equal to or larger than one) in and before the issue of the instruction to start the recording operation, and so as to insert one frame of the intra-frame encoded frames every m frames (m: an integer larger than n) after the issue of the instruction to start the recording operation (In Fig. 5, the number of intra-frame encoded frames within each of the picture groups after the issue of the instruction to start recording to be inserted is one in every m=9 frames while, in column 3, lines 45-50, the number of intra-frame encoded frames within each picture group generated in and before the issue of the instruction to start the recording to be inserted is one in every n=1 frame).

Regarding claim 7, Enari discloses an image pickup apparatus (Fig. 2) comprising: image pickup means ("input terminal 40" in Fig. 2); encoding means for encoding a moving picture signal output from the image pickup means ("Variable-Length Coding Circuit 44" in Fig. 2) using an intra-frame encoding method and an inter-frame encoding method to periodically combine intra-frame encoded frames obtained through the intra-frame encoding process and inter-frame encoded frames obtained through the inter-frame encoding process with each other to generate an encoded image signal (column 3, lines 50-54; Fig. 5); recording means for recording the encoded image signal generated by the encoding means on a recording medium (column 3, lines 50-67; Fig. 2); and control means for, in accordance with an instruction to start

recording of the moving image signal, controlling the recording means so as to start the recording operation from an image signal of a frame corresponding to the instruction to start the recording operation, and so as to make a period at which the intra-frame encoded frames are inserted after issue of the instruction to start the recording operation longer than that at which the intra-frame encoded frames are inserted in and before the issue of the instruction to start the recording operation (period of insertion of intra-frame encoded frames in and before start instruction is every one frame in column 3, lines 45-50; period of insertion of intra-frame encoded frames after start instruction is every nine frames in Fig. 5).

Regarding claim 8, Enari discloses an image pickup apparatus (Fig. 2) comprising: image pickup means ("input terminal 40" in Fig. 2); encoding means for encoding a moving picture signal output from the image pickup means ("Variable-Length Coding Circuit 44" in Fig. 2) using a intra-frame encoding method and an inter-frame encoding method to periodically combine intra-frame encoded frames obtained through the intra-frame encoding process and inter-frame encoded frames obtained through the inter-frame encoding process with each other to generate an encoded image signal (column 3, lines 50-54; Fig. 5); recording means for recording the encoded image signal generated by the encoding means in a recording medium (column 3, lines 50-67; Fig. 2); and control means for, in accordance with an instruction to start recording of the moving picture signal, controlling the recording means so as to start the recording operation from an image signal of a frame corresponding to the instruction to start the recording operation, and for controlling the encoding means so as to insert the

intra-frame encoded frames at a first period in and before issue of the instruction to start the recording operation, and so as to insert the intra-frame encoded frames at a second period longer than the first period after the issue of the instruction to start the recording operation (period of insertion of intra-frame encoded frames in and before start instruction is every one frame in column 3, lines 45-50; period of insertion of intra-frame encoded frames after start instruction is every nine frames in Fig. 5).

Regarding claim 9, Enari discloses an image pickup apparatus (Fig. 2) comprising: image pickup means ("terminal 40" in Fig. 2); encoding means for encoding a moving picture signal output from the image pickup means ("Variable-Length Coding Circuit 44" in Fig. 2) using an intra-frame encoding method and an inter-frame encoding method to generate an encoded image signal (Fig. 5; column 3, lines 50-54); recording means for recording the encoded image signal generated by the encoding means on a recording medium (column 3, lines 50-67; Fig. 2); and control means for, in accordance with an instruction to start recording of the moving picture signal, controlling the recording means so as to start the recording operation from an image signal of a frame corresponding to the instruction to start the recording operation, and for controlling the encoding means so as to carry out the encoding in accordance with an encoding procedure different from the encoding processing in and before issue of the instruction to start the recording operation after the issue of the instruction to start the recording operation (in Fig. 5, at least the order of the picture is changed, thus the encoding procedure is different).

Regarding claim 10, Enari also discloses the encoding means combines the intra-frame encoded frames obtained through the intra-frame encoding process and the inter-frame encoded frames obtained through the inter-frame encoding process with each other to generate the encoded image signal (Fig. 5; column 3, lines 50-54), and the control means controls the encoding means so as to make a rate of the intra-frame encoded frames after the issue of the instruction to start the recording operation lower than that of the intra-frame encoded frames in and before the issue of the instruction to start the recording operation (In Fig. 5, the rate of intra-frame encoded frames within each of the picture groups after the issue of the instruction to start recording is one in every 9 frames while, in column 3, lines 45-50, the rate of intra-frame encoded frames within each picture group generated in and before the issue of the instruction to start the recording is 9 in every 9 frames).

Regarding claim 11, Enari also discloses the encoding means combines the intra-frame encoded frames obtained through the intra-frame encoding process and the inter-frame encoded frames obtained through the inter-frame encoding process with each other to generate the encoded image signal (Fig. 5; Fig. 7; Fig. 8; column 3, lines 50-54), and the control means controls the encoding means so as to make a rate of the inter-frame encoded frames after the issue of the instruction to start the recording operation lower than that of the intra-frame encoded frames in and before the issue of the instruction to start the recording operation (Fig. 5, in Fig. 5 the rate of the inter-frame encoded frames after the issue of the start instruction is 6 in every 9 frames while, in

column 3, lines 45-50, the rate of intra-frame encoded frames in and before the issue of the start instruction is 9 in every 9 frames).

Regarding claim 12, Enari also discloses each frame of the moving picture signal is structured by a plurality of blocks each having a predetermined number of pixels (column 4, lines 16-22), the encoding means performs switching between the intra-frame encoding and the inter-frame encoding with respect to each of the blocks (column 4, lines 23-41; Fig. 3; Fig. 4; Fig. 5), and the control means controls the encoding means so as to make a rate of the inter-frame encoded blocks after the issue of the instruction to start the recording operation lower than that of the intra-frame encoded blocks in and before the issue of the instruction to start the recording operation (In Fig. 5, the rate of intra-frame encoded frames within each of the picture groups after the issue of the instruction to start recording is one in every 9 frames while, in column 3, lines 45-50, the rate of intra-frame encoded frames within each picture group generated in and before the issue of the instruction to start the recording is 9 in every 9 frames).

Claim 13 is rejected for the same reason as discussed in claim 1 in consideration of Enari also disclosing inputting means for inputting a moving picture signal ("input 40" in Fig. 2; column 3, lines 45-46).

Regarding claim 14, Enari discloses a recording apparatus (column 3, lines 59-67) inputting means for inputting a moving picture signal (column 3, lines 45-46); encoding means for encoding a moving picture signal input from the inputting means ("Variable-Length Coding Circuit 44" in Fig. 2) using an intra-frame encoding method and an inter-frame encoding method to periodically combine intra-frame encoded

frames obtained through the intra-frame encoding process and inter-frame encoded frames obtained through the inter-frame encoding process with each other to generate an encoded image signal (Fig. 5; column 3, lines 50-54); recording means for recording the encoded image signal generated by the encoding means on a recording medium (column 3, lines 50-67; Fig. 2); and control means for, in accordance with an instruction to start recording of the moving image signal, controlling the recording means so as to start the recording operation from an image signal of a frame corresponding to the instruction to start the recording operation, and so as to make a period at which the intra-frame encoded frames are inserted after issue of the instruction to start the recording operation longer than that at which the intra-frame encoded frames are inserted in and before the issue of the instruction to start the recording operation (in Fig. 5, period at which the intra-frame encoded frames are inserted after issue of the instruction to start the recording operation is 1 in every 9 frames while, in column 45-50, the rate at which the intra-frame encoded frames are inserted in and before the issue of the instruction to start the recording operation is 1 in every one frame).

Regarding claim 15, a recording apparatus (column 3, lines 59-67) comprising: inputting means for inputting a moving picture signal (column 3, lines 45-46); encoding means for encoding a moving picture signal input from the inputting means ("Variable-Length Coding Circuit 44" in Fig. 2) using a intra-frame encoding method and an inter-frame encoding method to periodically combine intra-frame encoded frames obtained though the intra-frame encoding process and inter-frame encoded frames obtained through the inter-frame encoding process with each other to generate an encoded

image signal (Fig. 5; column 3, lines 50-54); recording means for recording the encoded image signal generated by the encoding means on a recording medium (column 3, lines 50-67; Fig. 2); and control means for, in accordance with an instruction to start recording of the moving picture signal, controlling the recording means so as to start the recording operation from an image signal of a frame corresponding to the instruction to start the recording operation, and for controlling the encoding means so as to insert the intra-frame encoded frames at a first period in and before issue of the instruction to start the recording operation, and so as to insert the intra-frame encoded frames at a second period longer than the first period after the issue of the instruction to start the recording operation (period of insertion of intra-frame encoded frames in and before start instruction is every one frame in column 3, lines 45-50; period of insertion of intra-frame encoded frames after start instruction is every nine frames in Fig. 5).

Claim 16 is rejected for the same reason as discussed in claim 9 above in further consideration of Enari also disclosing inputting means for inputting a moving picture signal ("input 40" in Fig. 2; column 3, lines 45-46).

Claim 17 is rejected for the same reason as discussed in claim 1 above in further consideration of Enari also disclosing encoding a moving I picture signal output from image pickup means (column 3, lines 45-50).

Claim 18 is rejected for the same reason as discussed in claim 14 above.

Claim 19 is rejected for the same reason as discussed in claim 15 above.

Claim 20 is rejected for the same reason as discussed in claim 9 above.

Claim 21 is rejected for the same reason as discussed in claim 1 above.

Claim 22 is rejected for the same reason as discussed in claim 14 above.

Claim 23 is rejected for the same reason as discussed in claim 15 above.

Claim 24 is rejected for the same reason as discussed in claim 16 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Enari (US Patent 5,774,624) as applied to claims 1-5 and 7-24 above, and further in view of Kitamura et al. (US Patent 6,556,627).

Regarding claim 6, see the teachings of Enari as discussed in claim 1 above. Further, Enari also discloses the control means controls the encoding means so as to change the structure of the picture groups generated after the issue of the instruction to start the recording operation from the structure of the picture groups generated in and before the issue of the instruction to start the recording operation, in accordance with the instruction to start the recording operation (in Fig. 5, at least the order of the picture is changed, thus the structure is changed) in accordance with the instruction to start the recording operation issued in the middle of the encoded image signal by the encoding means (column 3, lines 45-50; Fig. 5).

However, Enari does not disclose transmission means for transmitting the encoded image signal generated by the encoding means to an external apparatus.

Kitamura et al. disclose a trans-coding system using a transmission means for transmitting the encoded image signal generated by the encoding means to an external apparatus while maintaining the encoded state (column 10, lines 46-61; Fig. 12).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the transmission means disclosed by Kitamura et al. into the apparatus disclosed by Enari to send the signals to external device, e.g., a remote display device for playback or a remote storage device for storage. The incorporated feature would provide the remote communication capability that is useful for users thus enhancing the interface of the apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
Patent Examiner